

## REMARKS

Entry of the amendments is respectfully requested. Claims 1-17 are amended. Favorable reconsideration and allowance of this application is respectfully requested in light of the amendments and the remarks that follow.

### 1. Rejections Under 35 U.S.C. 112, second paragraph

Claims 1-11, 14, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, Examiner indicates claim 1, line 5 is unclear if the long and continuous fibers are identical and the same based on the recitation "or." Also, Examiner indicates claim 5 contains an improper Markush group. Still also, Examiner indicates claim 14 improperly depends from claim 15. Still also, Examiner indicates the recitation "long or continuous" is vague and indefinite.

Applicant has amended claims 1-17 to address the Examiner's 35 U.S.C. 112, second paragraph, rejections and to place in better conformance with U.S. practice. Accordingly, reconsideration and withdrawal of the rejections is respectfully requested.

### 2. Rejections in View of Cited References

Claims 12 and 13 are rejected 35 U.S.C. 102(b) as being anticipated by European Patent Office No. 0259121 to Hitoshi et al. (herein "the EPO '121 reference"). Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the EPO '121 reference. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the EPO '121 reference in view of U.S. Patent No. 6,770,360 to Mientus et al. (herein "the Mientus et al. patent").

Claim 1 as amended recites a multilayer product made out of a substrate, and at each side of the substrate is at least one cover layer completely or partly covering the substrate, the substrate being a fibre reinforced thermoplastic product with randomly distributed fibres and with a density of less than 1.2 grams per cm<sup>3</sup>, preferably less than 1.0 grams per cm<sup>3</sup>, the at least one cover layer being a continuous fibre reinforced thermoplastic that bonds with the thermoplastic of the

substrate to form a single consolidation and in which continuous fibres are orientated approximately parallel to one another within each balanced layer.

None of the cited references teach or suggest a “consolidated” substrate that includes at least one cover layer being a continuous fibre reinforced thermoplastic that bonds at the reinforced thermoplastic substrate and in which continuous fibres are orientated approximately parallel to one another within each balanced layer as recited in claim 1. The EPO ‘121 reference teaches a lamination structure that includes a fiber reinforce plastic (hereinafter referred to as “FRP”) reinforced with a porous fiber layer (line 62, page 2-line 16, page 3). The porous fiber layer is constructed of randomly distributed short fibers impregnated with a carbonized binder such as phenolic resin (page 3, lines 29-30). The EPO ‘121 reference indicates that the phenolic resin is a “thermosetting” resin, to be distinguished from a “thermoplastic” resin used in the FRP layer (page 4, lines 4-7). Thus, the EPO ‘121 reference does not teach a fibre reinforced thermoplastic substrate that bonds at a fibre reinforced thermoplastic cover layer as recited in claim 1.

Furthermore, the porous fiber layer (alleged substrate) of the EPO ‘121 reference is not “consolidated” as understood by one skilled in the art. In fact, the EPO ‘121 reference teaches a way from a “consolidated” substrate. The EPO ‘121 reference discloses that the porosity of the disclosed porous fibre (alleged substrate) is controlled by the amount of phenolic resin added in the aqueous solution (page 4, lines 23-36). The mere adding of too much phenolic resin can cause the undesirable increased porosity of the porous fibre layer (Id.). The porous fibre layer (alleged substrate) of high porosity is desired to increase vibration dampening (page 5, lines 40-41). This teaches away from a “consolidated” substrate as recited in claim 1 of the present invention. The recited “consolidated” substrate is created using a press or vacuum, as described in the specification (see, e.g., paragraph 8 of application).

For at least the above-described reasons, the cited references do not teach each and every limitation of the claimed invention. Accordingly, allowance of claim 1 as amended is respectfully requested.

Claims 2-11 depend either directly or indirectly from claim 1, and are believed allowable for the same reasons that claim 1 is believed allowed. Claims 2-11 are also believed to recite patentable

subject matter in addition to that recited in claim 1. For example, none of the cited references disclose both a thermoplastic material in the substrate and in the cover layer. In fact, for reason described above, the EPO '121 reference discloses a porous fibre layer with a carbonized binder that is not a thermoplastic resin as recited in claim 5. Moreover, in traverse of the mistaken allegation by the Examiner (See page 3 of Office Action), the EPO '121 reference does not disclose the thermoplastic of both the substrate and cover layer being selected from the recited group consisting of polyolefins, polycarbonates, vinyl aromatic homopolymers, vinyl aromatic compounds containing copolymers, vinyl aromatic compounds containing graft copolymers or vinyl aromatic compounds containing blockcopolymers, thermoplastic polyesters, thermoplastic polyurethanes, polyetherimides, polyphenylene sulfide, polyphenylene ethers, polyamides and blends of thermoplastic materials comprising at least one of the mentioned thermoplastic materials.

Claim 12 as amended recites a process for the manufacture of a multilayer product that includes the steps of covering a substrate at each side at least partly with at least one cover layer, the substrate being a fibre reinforced thermoplastic product with randomly distributed fibres and with a density of less than 1.2 grams per cm<sup>3</sup>, preferably less than 1.0 grams per cm<sup>3</sup> and the cover layer being a continuous fibre reinforced thermoplastic with the fibres being orientated approximately parallel to one another within each layer; and consolidating the fibre reinforced thermoplastic product of the substrate at the fibre reinforced thermoplastic of the cover layer.

For reasons similar to those described above for claim 1, none of the cited references teaches or suggests bonding the fibre reinforced thermoplastic product of the substrate at the fibre reinforced thermoplastic of the cover layer as recited in claim 12. Accordingly, reconsideration and allowance of claim 12 is respectfully requested.

Claims 13-14 depend either directly or indirectly from claim 12, and are believed allowable for the same reasons that claim 12 is believed allowed. Claims 13-14 are also believed to recite patentable subject matter in addition to that recited in claim 12.

Claim 15 as amended recites a painted multilayer product made out of a substrate, and at each side of the substrate is at least one cover layer. The substrate is a fibre reinforced thermoplastic product with randomly distributed fibres and with a density less than 1.2 grams per cm<sup>3</sup>,

preferably less than 1.0 grams per cm<sup>3</sup>. The cover layer or layers is a continuous fibre reinforced thermoplastic with the fibres being orientated approximately parallel to one another within each layer. The multilayer product is provided at least on one side with at least one paint layer. The fibre reinforced thermoplastic product of the substrate is consolidated to the fibre-reinforced thermoplastic of the cover layer.

For reasons similar to those described above for claim 1, none of the cited references teaches or suggests a multilayer product that includes a “consolidated” substrate of fibre reinforced thermoplastic product that bonds at the fibre reinforced thermoplastic of the cover layer as recited in claim 15. Accordingly, reconsideration and allowance of claim 15 is respectfully requested.

Claim 16 depends directly from claim 15, and is believed allowable for the same reasons that claim 15 is believed allowed. Claim 16 is also believed to recite patentable subject matter in addition to that recited in claim 16.

Claim 17 as amended recites a process for painting a multilayer product that comprises the steps of covering a consolidated substrate at each side at least partly with at least one cover layer, the consolidated substrate being a glass fibre reinforced thermoplastic product with randomly distributed fibres and with a density less than 1.2 grams per cm<sup>3</sup>, preferably less than 1.0 grams per cm<sup>3</sup>, and the cover layer being a long fibre reinforced thermoplastic plastic film with the fibres being orientated approximately parallel to one another; providing a primer at a surface of the cover layer to be painted; and giving the surface of the cover layer to be painted a surface treatment followed by an application of one or more paint layers.

For reasons similar to those described above for claim 1, none of the cited references teaches or suggests process for painting a multilayer product that comprises the steps of bonding the fibre reinforced thermoplastic product of the “consolidated” substrate at the fibre reinforced thermoplastic of the cover layer as recited in claim 17. Accordingly, allowance of claim 17 is respectfully requested.

New claims 18-20 are dependent claims that are allowable because they depend on claims that are now allowable (i.e., 1, 12, 17).

## CONCLUSION

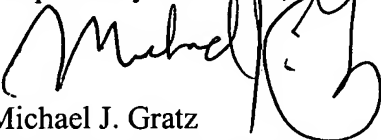
It is submitted that claims 1-20 are in compliance with 35 U.S.C. §§ 102 and 103 and each defines patentable subject matter. No new matter is believed to have been added.

A check in the amount of \$1,200.00 is included with this communication for payment of a request for a three-month extension of time and the filing fee for the Information Disclosure Statement included with this Response. Nevertheless, should the Examiner consider any fees to be due in conjunction with this or any future communication, authorization is given to direct payment of such fees, or to credit any overpayment, to Deposit Account No. 50-1170.

Also included herewith are a new Power of Attorney and an Assignment showing transfer of the application to new Applicant, BI Group.

If the Examiner has any further questions or concerns, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



Michael J. Gratz  
Registration No. 39,693

Date: March 29, 2006

Customer No. 23598

BOYLE FREDRICKSON NEWHOLM STEIN & GRATZ S.C.  
250 Plaza - Suite 1030  
250 East Wisconsin Avenue  
Milwaukee, WI 53202  
Telephone: (414) 225-9755  
Facsimile: (414) 225-9753